



# THE NEWSBEET

## FROM FIELD TO FACTORY Minimizing Loss and Increasing Output



### ALSO IN THIS ISSUE:

RESEARCH: TARE ROOM UPGRADES, CLEAN FIELDS AND SATELLITE IMAGERY

FACTORY UPDATES: MAKING IMPROVEMENTS

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## CONTENTS

Root of the Business .....	5
Ag View .....	7
Washington Update .....	8
<b>RESEARCH</b>	
TARE ROOM UPGRADES .....	11
CLEAN FIELDS .....	12
SATELLITE IMAGERY AS A TOOL .....	14
<b>GET TO KNOW YOUR BOARD</b>	
Clay Crumbaugh .....	16
Adam Herford .....	17
<b>FINANCIAL PLANNING</b>	
Talking About Tax .....	18
<b>PERSONNEL PERSPECTIVE</b>	
Employees Receive Service Awards .....	20
<b>FACTORY FOCUS</b>	
Want to Take a Factory Tour? .....	22
The latest news from Bay City, Caro, Croswell and Sebewaing .....	24
<b>YOUTH PROGRAMS</b>	
Scholarships Awarded to Area Youth .....	26
2018 Michigan Sugar Queen Crowned .....	28
<b>COMMUNITY CORNER</b>	
Hitting Home Runs in Community Outreach .....	30

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## ROOT OF THE BUSINESS

by Mark Flegenheimer, President and Chief Executive Officer

### MINIMIZING OUR LOSSES

As we enter another processing season, we have heightened focus on minimizing losses from the field through the factory. Every step in our supply chain, and at various places during our process, there are chances to minimize waste, shrinkage and losses. Whether it is from broken beets, factory extraction, pile storage or harvester loss, there is plenty of opportunity for improvement.

Advances will come from new equipment, employee training, procedural changes and increased attention to detail.

This year, we will increase our ventilated storage capacity by 25,000 tons, which will reduce both weight shrink and sugar shrink in the piles. In 2019, we will install a “dry” beet-handling system in Croswell which is much gentler on the beets and will reduce beet breakage. This year in Bay City, we are working to have all transfer trucks dump directly into the hopper so we avoid double or triple handling the beets.

Providing growers with nearly instant results from our new NIRS system and tare room upgrades (see Page 11) will allow shareholders to adjust harvesting decisions on the fly. This almost instantaneous feedback on every sample taken will give growers valuable information while they are in the fields.

One area we have not looked at recently is harvester losses. British Sugar has studied this for many years and Amalgamated Sugar in Idaho recently reported on how to measure these losses (see story on Page 12-13). As costs continue to escalate in every aspect of our business, we need to get accurate measurements on losses and work to minimize them. If a harvester is leaving one to two tons in the field, what steps can be taken to reduce those losses by a half ton or more? With 157,000 acres, a half-ton improvement would be worth about \$3.5 million of additional income to our growers.

Working together as a cooperative, we have the ability to minimize our losses during every step of the process — from the field through the factory.

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“Every step in our supply chain, and at various places during our process, there are chances to minimize waste, shrinkage and losses.”

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## STRENGTHENING THE BRIDGE OF TRUST

*“Trust is critical when two different identities — growers and employees — merge. Sharing becomes very easy when trust is present, but it becomes very difficult when trust is absent.”*

*by James Ruhlman, Executive Vice President*

Having gone through multiple group sessions over the past several months with the help of a nationally recognized professional development coach, we as an Ag staff have become more closely aligned and discovered some things about who we are and who we want to be going forward. Through the process of completing personal assessments and learning about emotional intelligence, goal setting and personal interaction skills, the Ag staff came up with three core values around which we intend to build our programs and services. Our core values are EFFECTIVENESS (we are successful in producing a desired and intended result), COMPASSION (we care deeply for our growers and their well-being), and INTEGRITY (with a strong moral foundation, we maintain a sense of wholeness).

A couple of years ago, a new structure was established in the Ag department. Pillars of focus were identified and roles and responsibilities changed. This new structure remains in place and we continue to build around the pillars of Agronomy, Research, Operations and Shareholder Relations. I strongly believe this structure provides the best foundation for maximum focus and achievement. As we continue on the path of development in this department, we will keep our core values at the forefront as we implement change.

Prior to being directly involved with the Ag department, I had always viewed the relationship between company personnel and our shareholders as important, but it becomes much more apparent when you have direct contact with shareholders on a daily basis. The interaction can be more thoughtful or intense. It can be cordial or confrontational. The key to the interaction though, is mutual respect and trust. Fostering that type of relationship helps acceptance and growth happen more readily. It has been said that “trust is the bridge that carries people past misunderstanding,” and we intend to strengthen the “bridge.”

As we went through our sessions, it became evident that as a department we all want to do the right thing in the right manner, and sometimes what we think is right is not necessarily what the shareholder perceives to be right. That is where transparency, understanding and honest communication comes into play. We’ve learned that sometimes doing things collectively and collaboratively can make us more effective in instituting change and we are becoming more intentional about getting input before wholesale changes take place.

The unique thing about being in a relationship versus being independent is that you need to maintain your unique identity and be yourself, yet at the same time understand and take care of others in the relationship. Sometimes that balance can be challenging. This same challenge is evident in our cooperative. As a farm unit, you want the autonomy and the freedom to “do your own thing” and as a department we want that same freedom. In most cases what is best for one is also good for the other, but there is always that middle ground where compromise needs to happen in order for the relationship to become stronger as a whole. Trust is critical when two different identities — growers and employees — merge. Sharing becomes very easy when trust is present, but it becomes very difficult when trust is absent.

As we move forward, we hope that our core values of effectiveness, compassion and integrity will make the bond in our relationship stronger and continue to strengthen the bridge of trust. We want our shareholders to understand who we are just as much as they want us to understand them. The goals for each of us are the same — grow and harvest a strong, healthy crop and process those sugarbeets into a product that sustains a strong, healthy cooperative. ■



# Government and Our Growers

by Ray Van Driessche, Director of Government Relations

## *The Farm Bill process continues to navigate around and through many potholes*

### THE 2018 FARM BILL

It became evident early on in the process that many issues were in play and needed to be resolved to get enough votes for passage of the 2018 Farm Bill. As in the last Farm Bill, the Supplemental Food and Nutrition Program (SNAP) was a major stumbling block for passage when the House Bill was voted on in mid-May. To complicate the process even more, the Freedom Caucus used the Farm Bill as a platform to negotiate desired changes to immigration policy resulting in the Farm Bill being voted down the first time around. Furthermore, an anti-sugar amendment was offered by Reps. Virginia Foxx of North Carolina and Danny Davis of Illinois. The amendment would have stripped out the benefits of the sugar provisions in the Farm Bill, but it was soundly defeated by a margin of 237-137. This stunning margin of defeat was the result of a tremendous amount of interaction with and education of legislators by Washington, D.C., and local industry representatives. The House Bill was voted on again in mid-June with just enough compromise on the immigration issue to garner the votes to pass the Farm Bill by a razor thin margin of **two votes**.

Just before the July 4 recess, the Senate Farm Bill was passed by a margin of 86-11, setting the stage for conferencing the House and Senate Bills together in the fall when legislators return from summer recess. With immigration policy and SNAP program revisions still very contentious and unsettled issues, it will not be a walk in the park to confer the bills together, but most believe there is enough will and determination to get the bill passed before an extension is necessary.

### TRADE AND TARIFFS

Unlike most commodities, the U.S. domestic sugar market will not be impacted significantly by the trade and tariff wars being played out by the Trump Administration. It is believed that the timely settlement of the anti-dumping/countervailing cases filed by the U.S. sugar industry in 2014 and the following suspension agreements positioned our industry to not be caught up in the North American Free Trade Agreement (NAFTA) renegotiating process. This is just one more example of the U.S. sugar industry being proactive in defending domestic sugar growers and processors, which is providing stability and long-term benefits.

### NATIONAL BIOENGINEERED FOOD DISCLOSURE REGULATIONS

On July 3, the U.S. beet sugar industry submitted comments to the United States Department of Agriculture (USDA) on the proposed National Bio-engineered Food Disclosure Rules. The main focus of these comments is that refined beet sugar does not contain bio-engineered DNA and therefore should not be labeled as a food ingredient that contains GMO DNA. Furthermore, it should not be labeled as being derived from a bio-engineered plant. The U.S. beet sugar industry also was part of two additional public comment submissions on the rules. These included a submission by the Safe and Affordable Food Coalition and one representing the American Farm Bureau, the American Sugarbeet Growers Association, the National Corn Growers, the National Soybean Association, the National Cotton Council and the U.S. Canola Association.

With more than 11,000 public comments submitted and then reviewed by USDA, the legislated July 29 deadline for the final rules to be released was delayed.

### SPECIAL RECOGNITION

*A sincere expression of gratitude and appreciation goes out to our Michigan Congressional members who supported the sugar industry in the Farm Bill process. Special recognition goes to Sens. Stabenow and Peters, Reps. Dan Kildee, Paul Mitchell and John Moolenaar and their staffers, who not only supported but vigorously defended our industry. Please take a few minutes to call their offices or send them an email to express your appreciation for their outstanding efforts on your behalf. We are very proud to be able to say that a number of our Michigan congressional legislators are recognized as industry champions throughout the U.S. sugar industry. The Michigan Sugarbeet Growers PAC Committee would like to express its appreciation to the Michigan Sugar Company shareholders and eligible employees who have funded, through PAC contributions, our ability to educate congressional and state legislators and build industry champions. ■*



**Ray Van Driessche**, Michigan Sugar Company's Director of Government Relations, is a third-generation farmer in mid-Michigan. He often travels to Lansing and Washington, D.C., to follow and advise on political activity that affects agriculture in Michigan.

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## TARE ROOM UPGRADES

With more than two years of study and analysis, Michigan Sugar Company has decided to adopt new technologies for testing quality in the company's raw material supplied by our sugarbeet growers. With our confidence in accuracy satisfied, our 2018 crop will be analyzed through near infrared spectroscopy (NIRS) technology and a German product referred to as a Betalyzer.

Some may ask, "Why the change, it seems like the old system worked just fine?" The answer to that question is "faster feedback to our shareholders and a test on each and every sample." The past practice of taking a sample of brei (from a sugarbeet that was run through a saw), squeezing out the juice and storing it in a freezer to be mixed later with other samples will change this year; instead, if a sample is taken from your truck, it will be analyzed immediately after it goes through the tare machine.

During 2016 and 2017, we ran samples throughout harvest from early September through mid-November. Understanding that 2016 was a low-quality year, we wanted to run the machine in 2017 as well to try to account for higher sugar values. We ran the machine on many different types of trials; variety, disease, fertility, harvest date, seed treatment, etc., to try to address as many variables as possible. The trials we ran through the machine were from numerous locations with different growing conditions, soil types and varieties by squeezing juice samples into vials. We also used the machine during our storage trial processing in February for which we often see elevated sugar contents because of dehydration and shrink. At the end of the trial periods, we were satisfied with results of this new technology. The company would not have

endorsed the implementation of the machine if we were not confident in its operation and accuracy.

With the implementation of this new technology comes a new lab adjacent to the tare machine in Bay City. The new lab houses four NIRS machines that will read the primary quality statistics of sugar, purity and recoverable white sugar per ton (RWST), and one Betalyzer machine that will be used as the primary calibration machine for the NIRS machines. The Betalyzer is an official International Commission for Uniform Methods of Sugar Analysis (ICUMSA) certified method of sugar analysis and is also equipped to run analyses beyond our three primary quality factors — aminos, sodium and potassium.

As a grower, you will see a wider range of variability in samples in 2018. In the past, we mixed as many as 20 samples to create a composite sample. In other words, those 20 tare samples became one lab sample with one reported sugar, purity and RWST. This year, you will get 20 readings instead of one.

The other advantage of the NIRS technology is that we will open our lab during the early delivery season to allow growers to bring in beets for testing, prior to them harvesting a field. This should aid in the decision-making process when trying to maximize returns.

We look forward to working with this new technology as we strive to provide our shareholders with more timely information during harvest. ■

— James Ruhlman, Executive Vice President

**ABOVE** Tare room.

**BELOW** New NIRS technology and Betalyzer equipment will improve sample testing accuracy while providing more trial results.





# CLEAN FIELDS

## Harvesting ALL That You Plant

Photo by Terry Cane

by Clarke Alder, Agronomist; Jonathan Shurtliff, Crop Consultant; and Aaron Firth, Crop Consultant, Amalgamated Sugar Company;  
Additional resource: Kelly Sharpe, Agronomist, GK Technology Inc.

**EDITOR'S NOTE:** This story is reprinted (with minor revisions) with permission from Amalgamated Sugar Company. The story originally appeared in December 2017 edition of "The Sugarbeet."

One of the strategic initiatives of Amalgamated Sugar Company is to continuously reduce farm-to-factory losses. Some growers experience significant loss during harvest due to poorly maintained or maladjusted harvesters, leaving sugarbeets in or on the ground. In some cases, growers may be losing 2 to 3 tons of beets per acre. The end result could cost the grower \$80 to \$120 per acre.

Methodology for conducting harvest loss appraisals is quite simple. First, a representative area is selected in a field, preferably right behind the current pass of the harvester. An area about 110 square feet in size, is measured and marked off. This is usually about 10 feet long across 6 harvested rows. Any remaining beets or chips left by the harvester are then gleaned, excepting tails with a diameter less than the size of a quarter. Beet remnants are then weighed and the total weight is divided by a conversion factor of 5. The result represents the total tons per acre of loss. See the following example:

**5 pounds (total sample weight)**  
**– 2 pounds (bucket weight)**  
**= 3 pounds of beets**

**3 pounds divided by 5**  
**= 0.6 tons per acre of loss**

Throughout Amalgamated Sugar Company's growing area, at least 100 loss appraisals were performed during the 2016 harvest season. The table below shows only 50 of those appraisals. Observations indicate most growers do an excellent job harvesting beets. However, in some cases, appraisals indicated losses upward of 5 tons per acre.

BRAND/ROW	# TESTED	AVG. LOSS (T/A)
Amity 12	10	0.928
Amity 6	19	0.829
Parma 6	21	1.032
<b>Total</b>	<b>50</b>	<b>0.93 Avg</b>

Several more showed losses in the 2 to 3 tons per acre range. Several brands of harvesters were evaluated during the season. The brand or age of the harvester seemed to have little correlation to the quality of harvest. Bent or broken puller wheels, worn grab rolls, loose chains and worn out bearings were largely to blame. Proper maintenance and correct adjustment are critical in preserving the integrity and performance of your sugarbeet harvester.

Another finding demonstrated the importance of evaluating harvester loss. Varying field conditions and soil types cause large swings in the number of beets left in the field. Some harvesters with minimal loss in one field experienced much higher loss in different fields due to this factor. Careful attention to field conditions and soil moisture will provide for a clean, efficient harvest.

In 2013, I conducted a harvest loss study in the western growing region of Amalgamated Sugar Company. The study indicated an average loss of 1.3 tons per acre across 11 different harvester models. My study also noted effects from soil type, digging depth and harvest speed. In general, harvest loss was higher with dry soils, heavy soils, harvesting too fast or digging too shallow. I also noticed that with proper adjustments, differences between harvester brands were negligible — similar to the observations of other agriculture staff conducting appraisals in the east part of the growing area in 2016. Following is a summary of my findings:



**Clarke Alder** is a Research Agronomist for the Amalgamated Sugar Company and also the Managing Editor of The Sugarbeet magazine. He earned his bachelor's degree in horticulture and his master's degree in weed science from Utah State University and resides in Middleton, Idaho, with his wife and three children.

# Avoiding Harvest Loss

Harvest loss is most often a result of improperly adjusted or worn equipment. Below is a quick checklist of major items to look at both before you make the trip to the field and during operation.

## SOIL TYPE AND DIGGING DEPTH ANALYZED FOR HARVESTERS TESTED, TREASURE VALLEY, 2013

Soil Type	Yield Loss, Tons Per Acre
Heavy	1.53
Light	1.06
Digging Depth	Yield Loss, Tons Per Acre
3 inches	1.57
4 inches	1.09

For illustration purposes, assuming an average maximum loss of 1.5 tons per acre, according to data from the study done in 2013, across the 177,358 acres contracted in 2017, growers could potentially be leaving 266,037 tons of sugarbeets in the field. At a current market value of \$40 per ton, harvester loss could potentially cost our Growers about \$10.6 million. Not all loss can be eliminated, however, it can be reduced. Reducing average loss from 1.5 tons per acre to, let's say, 0.75 tons per acre is doable, and would provide for an additional 133,019 tons to be delivered. A value of \$5.3 million could be captured. Careful scrutiny of harvester performance will yield large dividends. ■



**ABOVE:** An area about 110 square feet in size, is measured and marked off. This is usually about 10 feet long across six harvested rows. Any remaining beets or chips left by the harvester are then gleaned, excepting tails with a diameter less than the size of a quarter.

— Photos by Clarke Alder

## DEFOLIATOR

- ☐ Proper maintenance after previous year's harvest and during operation (bearings, belts, chains, etc.).
- ☐ Purchase quality flails and replace them when necessary.
- ☐ Check for any flail "side play" — if necessary, adjust flail fastening rings in and/or purchase higher quality spacers to go in between flails.
- ☐ Proper adjustment and maintenance on scalping knives/disks. Keep them sharp and positioned correctly. This includes tension adjustments.
- ☐ Keep steel flails within 1-2 inches of the top of the beet so as not to chew off the top of the beet.
- ☐ Make sure rubber flails are in good repair and that they "hug" both sides of the beet, effectively tearing off and throwing the foliage to the side.
- ☐ Defoliators set too low will chew off the top of the beet or knock the beet out of the row where the harvester can't pick them up.

## HARVESTER

- ☐ Proper maintenance after previous year's harvest and during operation (bearings, belts, chains, etc.).
- ☐ Before you enter the field, make sure the lifter wheels/struts are tight and have no play.
- ☐ Check for worn lifter wheels and that the pinch point — the gap where the lifter wheels come together — is the proper measurement.
- ☐ Inspect the paddle shaft.
- ☐ Record the spacing between the paddle shaft and lifter wheels, as well as the spacing between the apron chain and the grab rolls.
- ☐ If chains were removed, make sure they are installed the correct direction. Check direction of the grab rolls.
- ☐ Check for bent or broken chain rods and walking chains.
- ☐ For safety, check for any missing shields as well.
- ☐ Once you are in the field, make sure your digging depth is in accordance with your soil type and moisture. Experiment to find the "sweet spot."
- ☐ When in the field, check the chain pressure or scrub ratio to make sure you are not breaking tails or chewing up beets as they go up the elevator.
- ☐ Finally, pay attention to what you are leaving behind. As you drive by the previous pass, try to take a look every once in a while to make sure you are still operating at an optimum capacity.



— Top photo by Clarke Alder;  
All other photos by Dennis Searle



# SATELLITE IMAGERY: A New Tool for Sugarbeet Growers

by Kerrek Griffes, Field Consultant

In 2018, Michigan Sugar Company wrote variable rate planting prescriptions for growers using satellite imagery. The system is relatively easy to implement. Growers set up meetings with their Michigan Sugar Company field consultant before planting to start planning. The field consultants then would either build prescriptions on the spot or take the ideas that were discussed back to the office and create prescriptions. Prescription-building is best done with grower input.

Growers commented that the process was relatively simple for them. All that was required on the grower's part was a planter capable of variable rate seeding and knowledge of their farms. The prescriptions can be easily imported into most planter monitors. Most of the prescriptions that were created in 2018 were implemented on-farm.

### Here's what a few growers had to say:



**Mike Wark:** From the very beginning the process made sense. I sat down with my field consultant and we looked at a lot of satellite imagery to get a feel for what the field has done in the past, over multiple crops. We let the program "do its thing" and create management zones. There was really only one field where we needed to adjust the zones, and that was pretty easy, too. We then filled in the seeding rates for the zones and loaded the prescription into the monitor and that was it. I'm confident that the program will help my return on investment by saving seed cost where I can and investing where I should.



**Erik Felske:** The timing couldn't have been better for Michigan Sugar to implement this technology. I invested a lot of time and money into my planter this winter and this took a lot of stress off of me. My field consultant sat down with me and spent a couple of hours putting the prescriptions together. Using previous year's satellite imagery makes a lot of sense because, like most growers, I don't have a yield monitor on my beet harvester. This makes total sense to me.

**Michigan Sugar Company field consultants are looking forward to expanding this program in 2019. Please contact your field consultant to begin the planning process. ■**



**Kerrek Griffes**, field consultant in Michigan Sugar Company's Central and West districts, joined the company in 2017. He is also the coordinator for the internship program.

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*The Crumbaugh family, Kyle, Logan, Clay, Christine and Lily the dog.*

### **ST. LOUIS** – Family. Leadership. Dedication.

These are just three words that describe Clay Crumbaugh, who operates a 3,500-acre farm near St. Louis in Gratiot County and was elected to the Michigan Sugar Company Board of Directors at the company's annual meeting in January.

A fourth-generation farmer, Crumbaugh, along with his wife, Christine, and sons, Kyle and Logan — the fifth generation — grows corn, soybeans, wheat and about 940 acres of sugarbeets.

"We started growing sugarbeets when Monitor Sugar came to Gratiot County in 1986," said Crumbaugh. "We slowly expanded our acreage. They helped us diversify. They are a challenge in a good way — exciting and always something different.

"Sugarbeets have made us some money; that's the bottom line," he added. "We are committed to sugarbeets and see a bright future in the industry."

The roots of the Crumbaugh farm can be traced to Clay's great-grandparents, Vern and Maime Crumbaugh, who farmed in Gratiot County. Clay's grandparents, Robert and Marcelle Crumbaugh, married in 1936 and came to Bethany Township in 1944, increasing the size of

# Meet Your Clay Crumbaugh

*by Rob Clark, Director of Communications and Community Relations*

their farm from 80 acres to 200 acres. The original farmhouse on the property was built in 1948.

Clay's parents Rex and Kathleen Crumbaugh continued the farming tradition on the land.

The sense of family history is strong at the Crumbaugh farm and both Clay and Christine have set an example of leadership and dedication that is now being followed by their sons.

Clay Crumbaugh served on the Monitor Sugarbeet Growers Association Board of Directors from 1996 until the merger with Michigan Sugar in 2004. He then served on Michigan Sugar Company's West District Board from 2004 to 2018. His current term serving on the Michigan Sugar Company Board of Directors is for four years.

He also serves on the Michigan Farm Bureau Sugarbeet and Dry Bean Advisory Committee, is a past president of the Gratiot County Farm Bureau Board of Directors, on which he served from 1992 to 1999, and is a former member of the Gratiot County Fair for Youth Fair Board.

In his free time he enjoys flying his Cessna 172 airplane as a recreational pilot.

Christine Crumbaugh, who manages the Crumbaugh farm, has an equally impressive resume of board and community service. She serves as president of the Gratiot Area Chamber of Commerce and as a member of the Michigan Natural Resources Commission, having been appointed to that post by Governor Rick Snyder.

She served on the Board of Directors for Greenstone Farm Credit Services from 2012 to 2018, at which time she was elected to the Board of Directors at AgriBank, representing Greenstone.

She's also a third degree Tae Kwon Do black belt and a professional photographer.

Both Kyle, 25, and Logan, 22, earned bachelor's degrees in agribusiness from Michigan State University and have been active in Michigan Sugar Company's Youth Sugarbeet Project, FFA, 4-H and Michigan Farm Bureau's Young Farmer Program.

The brothers were instrumental in helping the farm earn Cropping System certification through the Michigan Agricultural Environmental Assurance Program that honors best management practices as they pertain to the environment.

With the family's trusty 10-year-old black Lab, Lily, beside him, Clay Crumbaugh says he is grateful to share his professional life with those closest to him.

"I just love working with my family," he says. ■

# Directors: & Adam Herford

**ELKTON** – If you are talking about five-generation farm families that have a long-standing relationship with Michigan Sugar Company, you could say Adam Herford's family wrote the book.

Actually, they did.

And if you visit the Herford farm, located in Oliver Township just north of Elkton in Huron County, that little book filled with family history is likely to come out in helping tell their story.

Today, Adam Herford oversees the family's farm operation that includes about 1,900 acres of sugarbeets, a crop Adam says has "made the good times better and the hard times not so hard." The family also grows alfalfa, navy beans, white wheat, corn and soybeans and raises cattle.

"Growing sugarbeets is a unique opportunity that over the years has really helped our farm grow to where it is today," said Adam, 39, who graduated from Laker High School in nearby Pigeon in 1997 and went on to earn his bachelor's degree in agribusiness management from Michigan State University in 2001.

Adam was elected to the Michigan Sugar Company Board of Directors at the company's annual meeting in January, following in the footsteps of his father William "Bill" Herford, who served the board from 2002 to 2018.

The Herford farm was established in 1890 by Adam's great-great-grandparents, Andrew and Elizabeth Herford. His great-grandparents, Edwin Sr. and Frieda Herford, continued the farm and grew sugarbeets.

"They hauled the beets to Elkton and threw them off wagons into train cars," said Bill Herford. "Then, the beets went to Sebewaing."

Welland and Grace Herford, Adam's grandparents, were the third generation to run the farm and incorporated the operation — still known today as W.A. Herford & Sons Inc. — in 1971.

Bill and the late Pauline Herford, along with Bill's brother and sister-in-law Jim and Kim Herford, were next to run the farm. Pauline Herford died in 2000 after a battle with cancer. Bill married Barb Herford in 2004 and remains active in the farm although control has been passed to Adam and his brother Luke, along with Adam's Cousin Brandon (Jim's son).

"It's a real family operation," said Adam. "We work closely with other family members to make sure the farm moves forward."



*Adam Herford is following in the footsteps of his father, William "Bill" Herford, who served on the Michigan Sugar Board of Directors from 2002 to 2018.*

Among the farm's endeavors is a partnership with four other farms called Allied Farm Enterprises Inc. that supplies feed to four dairies in Huron and Sanilac counties.

Adam also has represented the farm as part of several statewide and community organizations. He served nine years as a board member for Huron County Farm Bureau and four years on the Michigan Farm Bureau's Young Farmer Committee, including two years on the executive committee. He also is a member of the Elkton Lions Club.

When he's not working on the farm, Adam enjoys traveling, including a recent trip to Germany where he had the opportunity to tour some sugar-beet factories and farms.

He said his favorite trip was to Hawaii.

Adam said he and his brother and cousin all take leadership with different roles on the Herford farm and he envisions a day when the sixth generation of the family is leaving its mark on the operation.

Luke and Rita Herford have two young daughters — Alexis and Lauren — and Brandon Herford has a daughter named Isabella and a fiancée named Sherry.

Asked if one of those kids might one day run the farm, Adam doesn't hesitate:

"It's possible." ■



**Rob Clark** is Director of Communications and Community Relations for Michigan Sugar Company. He is a 1995 graduate of Knox College and worked for 22 years as a journalist before joining Michigan Sugar Company in 2018. He and his wife Claire have four sons.



## Let's Talk About Tax: How the New Law May Impact YOU!

by Chris Morse, CPA/PFS, CGMA, MST  
Greater Michigan – Regional Managing Principal  
Rehmann



***In December 2017, Congress and President Donald Trump passed the most significant overhaul of America's tax system in decades. While many are familiar with the tax rate changes included in the Tax Cuts and Jobs Act (TCJA), once you dive a bit deeper, you will notice there are many more nuances. Let's review a few of those items:***

### DEPRECIATION

Capital purchases now have expanded availability for faster write-off under several different provisions:

- **Section 179** – A taxpayer can now write off up to \$1 million of many fixed asset purchases in the year of acquisition, subject to a phase-out that starts when capital expenditures exceed \$2.5 million.
- **Bonus depreciation** – In addition to section 179, bonus depreciation has been expanded to allow 100 percent write-off of qualified acquisitions, which now includes plants bearing fruits and nuts.
- **Asset lives** – New (not used) farm equipment (except for grain bins, fences or other land improvements) can now be depreciated over a five-year period, which is handy if the taxpayer doesn't use (or qualify for) section 179 or bonus depreciation.

### FARM LOSSES

In the past, farm losses were limited if the taxpayer received certain subsidies. These rules are now expanded to apply to the business losses (including farm losses) of all noncorporate taxpayers, without regard to receipt of subsidies. This new provision limits businesses losses per year to \$250,000 for a single taxpayer and \$500,000 for couples filing a joint return.

While this provision will only affect taxpayers with multiple sources of income, the impact can be quite severe. Individuals who incur large business or farm losses but generate other types of income could end with a distorted tax liability. It is important to remember that limited losses can still be used to offset other types of business income and that any excess losses are carried forward to future years.

Separately, the two-year carryback period for *net operating losses* was eliminated, EXCEPT for farmers and insurance companies.

### PASS-THROUGH DEDUCTION

Taxpayers who own sole proprietorships and other pass-through entities may be allowed a deduction of up to 20 percent of the business' income. The deduction sizes will vary depending on eligibility, limitations, phase-outs and thresholds.

While the deduction is targeted at pass-through entities, not all businesses operating in these forms will qualify. The provision limits the ability of "specified service businesses" from utilizing the deduction. The taxable income limitation is based on the taxpayer's (not the pass-through business') overall taxable income. Entities not considered a specified service business are still not guaranteed the full deduction. Another set of limitations needs to be considered involving W-2 wages and tangible assets within the business.

As it pertains to cooperatives and their patrons, a technical correction of the TCJA essentially puts them in the same place as they were before the new tax law. A version of the old 9 percent Domestic Production Activities Deduction (DPAD) still exists and can be used by the coop or passed through to patrons.

### CORPORATE TAX RATES

The corporate tax rate structure has been altered significantly under the TCJA. Tax brackets with a top rate of 35 percent have been eliminated and replaced with a flat 21-percent tax rate. While the reduced corporate rate may cause many pass-through businesses to contemplate converting to C-corporations, there are many factors that need to be considered. Although the 21 percent flat corporate rate is significantly lower than the 37 percent top individual rate that pass-through businesses are generally subject to, C-corporations also are subject to a second layer of taxation when dividends are paid out of the company's profits. C-corporations also are not eligible for the 20-percent pass-through deduction that can reduce a pass-through business' overall effective tax rate to as low as 29.6 percent.

The TCJA contains many potential benefits, but also some traps and pitfalls. Please consult your tax advisor regarding these provisions before taking action. ■



**Chris Morse** began his career in public accounting in 1986. His experience includes providing accounting, tax, financial planning and business consulting services to family owned and closely held businesses, their shareholders and officers, as well as publicly held companies. He has done extensive work with agribusiness, construction, retail, hospitality, high-technology, engineering, manufacturing, professional services and oil and gas industry clients, as well as high-net-worth individuals.



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# PERSONNEL PERSPECTIVE



Nicole Ciesielski, Warehouse Manager at Michigan Sugar Company's factory in Caro was recently recognized for 10 years of service.

## Creators of the World They See

### Michigan Sugar Company employees honored for years of service

**KOCHVILLE TOWNSHIP** – On May 23, Nicole Ciesielski, Warehouse Manager at Michigan Sugar Company's factory in Caro, was honored for 10 years of service during the company's annual Service Awards program at Saginaw Valley State University.

Ciesielski, who lives in Bay City, planted her career with Michigan Sugar Company in 2008, working as a general sugar packer at the Bay City factory. She later worked as a shift supervisor at the Sebewaing factory before moving to the Caro plant in 2016.

She said a common thread ties all of the company's locations together.

"One thing that carries through at all the locations is how much the employees become a family," she said. "The people who work here have developed friendships that go way beyond working together. We're talking about second- and third-generation friendships in some cases. Their dads were friends, their grandpas were friends and now they're friends."

"That's why you see people work here for 30 to 40 years."

Whether it is five or 45 years, Michigan Sugar Company looks forward each year to honoring its employees who are celebrating milestone anniversaries. This year, 172 of Michigan Sugar's roughly 750 year-round employees celebrated such anniversaries. Among those, 107 attended this year's awards program. In total 31 employees were recognized for celebrating five years of service, 38 for 10 years, 12 for 15 years, 12 for 20 years, three for 25 years, five for 30 years, five for 35 years and one for 45 years.

The theme of the Service Awards program was "I am the Creator of the World I See" and the keynote speaker was Jeff Ruby, owner of RedRock Leadership.

Here is a look at the employees recognized during the event. **To all of you, thank you for your service!** ■

— Rob Clark, Director of Communications and Community Relations

#### 5 YEARS

Kevin Messing	Agriculture	Croswell
Bruce Perry	P&W	Bay City
Eury Zamora	P&W	Bay City
Michael Armstrong	P&W	Bay City
Miguel Rios	P&W	Bay City
Terrance Lee	P&W	Bay City
Timothy Hill	P&W	Bay City
Josiah Amthor	P&W	Bay City
April Crampton	P&W	Sebewaing
Cindy Holzwart	P&W	Sebewaing
David Proper	P&W	Sebewaing
Howard Stolter	P&W	Sebewaing
Ryan Curl	P&W	Sebewaing
Andrew Gerhauser	Operations	Bay City
Christopher Filcek	Operations	Bay City
Dylan Zimmerman	Operations	Bay City
Joshua LaFramboise	Operations	Bay City
Keith Madaj	Operations	Bay City
Lawrence Kerkau II	Operations	Bay City
Nathan Bohlinger	Operations	Bay City
Aaron Swayne	Operations	Caro
David Kirk	Operations	Caro
James Heckroth	Operations	Caro
Justin Kilbourn	Operations	Caro
Edwardo Hernandez	Operations	Croswell
Alaina Szulborski	Operations	Croswell
Matthew Drummond	Operations	Croswell
Zachary Bursick	Operations	Sebewaing
Christopher Schanbeck	Operations	Corporate
Sandra Anderson	Purchasing	Corporate
Ann Kovacs	Accounting	Corporate



Tanya Richard, Senior Network Technician at Michigan Sugar Company, stands with Executive Vice President James Ruhlman, left, and President and CEO Mark Flegenheimer (son of Ernest Flegenheimer) after receiving the 2018 Ernest Flegenheimer Award on May 23 at the Employee Service Awards program.

## 10 YEARS

Ron Meyer	Agriculture	Bay City
Jason Martens	Agriculture	Sebewaing
Jon Zuzga	Agriculture	Corporate
Orlando Sepeda	Agriculture	Bay City
Andrea Jacobs	P&W	Bay City
Brandon Zeilinger	P&W	Bay City
Brian Bedell	P&W	Bay City
Brian Jones	P&W	Bay City
Camden Becker	P&W	Bay City
Chris Boughner	P&W	Bay City
Daniel Sartain	P&W	Bay City
James Heckard	P&W	Bay City
Jamie Britton-Raines	P&W	Bay City
Jodi Sheneman	P&W	Bay City
Larry Sampson	P&W	Bay City
Melissa Garzell	P&W	Bay City
Robert LeClair	P&W	Bay City
Vincent Brown	P&W	Bay City
William Trepkowski	P&W	Bay City
Rick Bowker	P&W	Bay City
David Redmond	P&W	Bay City
Nicole Ciesielski	P&W	Caro
Brian Miller	P&W	Sebewaing
Cheryl Simmons	P&W	Sebewaing
Steven Schanhals	P&W	Sebewaing
Christy Eicher	P&W	Sebewaing
Earl Davis	P&W	Sebewaing
Karen Furness	P&W	Sebewaing
Ronald Lesoski	P&W	Sebewaing
Phil Allen	Operations	Bay City

Jeffrey Sakon	Operations	Bay City
Joe Bladecki	Operations	Bay City
Keith Pahl	Operations	Bay City
Troy Enciso	Operations	Bay City
Chad Justice	Operations	Caro
Daniel Fritz	Operations	Sebewaing
Tricia DeGroat	Sales & Mktg.	Corporate
Carol Jankowski	Sales & Mktg.	Corporate

## 15 YEARS

Gloria Chatfield	P&W	Sebewaing
Maria Garcia	P&W	Sebewaing
Patrick Nitz	P&W	Sebewaing
Shery Bedore	P&W	Sebewaing
Susan Mardlin	P&W	Sebewaing
John Churchill	Operations	Caro
Randall Matthews	Operations	Sebewaing
William LaBuhn	Operations	Sebewaing
Jon Alexander	IS	Corporate
Tanya Richard	IS	Corporate
Margarita Gonzalez	Accounting	Corporate
Brian Haraga	Accounting	Corporate

## 20 YEARS

Roger Helmreich	Agriculture	Bay City
Charlene Thompson	P&W	Bay City
Sheila Mobley	P&W	Bay City
Dolores Salcedo	Operations	Bay City
Jeremy Amthor	Operations	Bay City
Michael Van Hove	Operations	Bay City
Douglas Hollenbeck	Operations	Croswell
James Hering	Operations	Croswell

Matthew Tucker	Operations	Corporate
Darlene Wesfall	Sales & Mktg.	Corporate
Linda Forgash	Accounting	Corporate
Tim Rokosz	Accounting	Corporate

## 25 YEARS

Mark Timko	Operations	Caro
Dale Wood	Operations	Sebewaing
Edward Coffindaffer	Operations	Sebewaing

## 30 YEARS

Jeffrey Elston	Agriculture	Sebewaing
Ken Makovics	Agriculture	Bay City
James Damm	P&W	Sebewaing
Randy Elizando	Operations	Caro
Michael Millershaski	Operations	Corporate

## 35 YEARS

Harry Torzynski	P&W	Bay City
Joann Hayes	P&W	Bay City
Lloyd Haag	P&W	Sebewaing
Craig Wilder	Operations	Caro
James Ruhlman	Executive	Corporate

## 45 YEARS

Gerald Grevel	Operations	Corporate
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# Tanya Richard Honored with 2018 Ernest Flegenheimer Award

## Senior Network Technician has been with Michigan Sugar Company 15 years

Tanya Richard says she was “100-percent speechless,” when she was announced as the recipient of the 2018 Ernest Flegenheimer Award.

The award is given each year during Michigan Sugar’s Employee Service Awards program. It honors employees for their wisdom, integrity and character, the same qualities that Ernest Flegenheimer brought to Michigan Sugar as President and CEO from 1963 to 1993.

“It is such an honor to receive this award,” said Richard, who joined Michigan Sugar Company in March 2003 and works as a Senior Network Technician at corporate headquarters in Bay City. “Mr. Flegenheimer possesses the qualities of hum-

bleness, being a good listener and being the person you could go to talk with to provide reassurance that you are an important part of the company.

“His legacy and everything he stands for is something we all want to achieve.”

Richard and her husband Heath live in Bay City and have three children — Tristan, 12; Alexandra, 10; and Olivia, 5.

“To have that awarded to me has brought me to the realization that this is where I’m meant to be,” said Richard. “I’m very proud to be a part of this company. It is my second family without a doubt.” ■

— Rob Clark, Director of Communications and Community Relations

## Ernest Flegenheimer Award Winners from 2006-2018

The following employees have received the prestigious Ernest Flegenheimer Award in recognition of their wisdom, integrity and character while serving Michigan Sugar Company:

2006 – John Wyett

2007 – Jim Martin

2008 – Chris Dunham

2009 – Robert Arnold

2010 – Keith Kalso

2011 – Carol Kunitzer

2012 – Julie Perry

2013 – Eugene Stewart

2014 – Rick List

2015 – George Painter

2016 – Gerald Sorenson

2017 – Ann Kovacs

2018 – Tanya Richard



**ABOVE** More than 800 people toured the Bay City factory between September 2017 and April 2018, more than double the previous year. Each visitor left with a special "Factory Tour" branded bag of white granulated Pioneer Sugar and commemorative "Pete the Beet."



# Take a Tour!

by Elizabeth Taylor, Ag Communications Coordinator

The first time I toured Michigan Sugar Company's factory, I was blown away at the complexity of the process of making sugar from a sugarbeet. To be honest, I was also a little confused! Thick juice, thin juice, high-raw sugar and low-raw, standard liquor... don't get me wrong, I was amazed at the depth of the process, but I also left that day not completely understanding how sugar was made.

That feeling stuck with me as we started building the idea of expanding our tours. From the beginning, the idea of offering public tours stemmed from the goal of education — educating our community about who we are and what we do, educating our growers about our processes and operations, and educating our future generations about agriculture, food processing and being a good neighbor.

Last September, we opened tours with a new, streamlined experience: a specific tour route, trained tour guides, a designated staging area, a video highlighting our growing process and a standard, simplified tour script. We focused on the basics — after all, the goal is education — and we wanted people to leave with a clear understanding of how sugar is made. Through the changes, we were able to give visitors a fun, behind-the-scenes look at how sugarbeets are sliced, how the sugar is extracted and how the packaging and warehouse facilities operate.

The response to tours last year was overwhelming — in a positive way. In total, more than 800 people toured the Bay City factory between September 2017 and April 2018, more than double the previous year. Each visitor left with a special "Factory Tour" branded bag of white granulated Pioneer Sugar and commemorative "Pete the Beet." Throughout the season, we received countless thank-you messages, positive comments and photos of Pete displayed in visitors' own workplaces or homes.


This tour season will bring a new welcome center, a companion for Pete (her name is Betty), as well as more tour options. The welcome center, located outside our Bay City factory's conference center, will be the starting and ending point of the tours. It will focus on Michigan Sugar Company and sugarbeet education, as well as showcasing our community outreach and involvement.

Our 2018 tour season will start in September, and run through February or March of 2019. We are expanding our tour offerings this season — still offering public and group tours, adding special grower tours and a field trip offering for high school groups.

My sugarbeet processing knowledge has come a long way since my first time touring the Bay City facility. Now, I can tell you the journey a sugarbeet takes through the factory by heart! But every time I give a tour, I get to see what our new visitors see — a sugarbeet, grown and cared for by our shareholders, come into a 110-year-old factory, become white sugar, and be packaged into a familiar bag and stacked by robots to be sent to grocery store shelves.

We have a unique opportunity to educate our community members on agriculture, food processing and food packaging all in one tour. Watching people's eyes light up as they taste the warm sugar and walk out with a new-found understanding and appreciation for Michigan Sugar is just one of the many things that makes me proud to be a part of this great cooperative.


If you haven't taken a tour, I encourage you to visit us this season. Visit our website, [www.michigansugar.com/factory-tours](http://www.michigansugar.com/factory-tours) for available dates. ■



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**Elizabeth Taylor** is the Ag Communications Coordinator at Michigan Sugar Company. She joined the company in 2016, and works closely with the Agronomy Department to create and share meaningful information with its growers.

# "NOTHING AS REWARDING..."



as watching that last load of sugarbeets leave the field. Knowing we started with a seed, tended, nurtured and helped it meet its full potential-- from seed to abundance.

That's why I love to bring my daughter out with me. She learns lessons about work ethic, putting your heart and soul into your work and persistence. It's the exact same way I was taught.

Farming has changed over the years but one thing hasn't: Betaseed has been our partner across generations. They understand our needs from disease control to tonnage and sugar content. Using research to stay one step ahead, they give us confidence for the future."

#### Rita Herford

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# FACTORY UPDATES

## BAY CITY

From extreme heat to frozen beets, there were many challenges throughout the 2017-18 campaign, yet Bay City still finished slice by Feb. 25, initiating an early start to maintenance and several capital projects. In addition, with two storage tanks full of extract and standard liquor, operations continued to granulate sugar for almost 50 more days.

The most notable challenge this past campaign was with the diffusion juice solids that were elevated by more than 50 percent. This caused excessive wear and tear on equipment, requiring significant maintenance to ready the factory for the next crop. More than 100 feet of the flume was relined with 3CR12 stainless steel and the flume clarifier gearbox was upgraded to a higher load rating this summer.

Dewatering of sugarbeet pulp after extraction is also an integral part of the process due to its impact on recovery and energy. Wet pulp exiting the Diffuser is 90 percent water and 2.5 percent sugar. This stream is fed through twin screw pulp presses to reduce the water content down to 70-75 percent. The press water is then returned to diffusion to recover sugar and minimize evaporation energy. Maintaining the lowest possible pressed pulp moisture is equally important to reduce energy needed for drying. Here, fibrous pulp and solids that come in with the beets wear down the pulp press scrolls over time and reduce their efficiency. Specialized hard-face welding was performed to resurface the scrolls back to the tight tolerances needed.

Some of the key capital projects included installation of a third slicer to minimize downtime between knife changes and improve cossette quality and an upgrade to the Putsch filter control system to harness the latest technology and address repeat downtime issues.

In addition, a pilot study was recently completed with Krebs hydro-cyclones as a new component of the wastewater treatment process to reduce total suspended solids (TSS) by up to 50 percent and recapture biomass post anamnet digester.



A hydro-cyclone operates using centripetal forces to separate particles by density. Placement of the hydro-cyclones prior to Lamella clarifiers has reduced the TSS loading to the clarifiers and allowed them to operate more effectively and in turn reducing the TSS loading in the system.

The preliminary findings of the study met expectations and the hydro-cyclones are now a permanent fixture of Bay City's wastewater treatment process. In order to meet the demands of the entire process flow, a second set of hydro-cyclones has also been ordered and is scheduled for operation sometime in late 2018.



**TOP LEFT** Specialized hard-face welding is being performed to resurface the scrolls back to tighter tolerances.

**MIDDLE** Placement of the hydro-cyclones before clarifiers has reduced the TSS loading to the clarifiers so they operate more effectively.



**BOTTOM LEFT** With warmer temperatures through the winter and a wet spring, we are screening 50,000 tons of lime that was generated during the campaign. The screened lime is dry, will run through a spreader nicely and is ready for pick up at the Bay City factory.

## CARO

Wow! The beet crop between Caro and Bay City looks exceptional this year. If we can just catch some timely rain and maintain good disease control this year it looks like there will be plenty of beets from which to extract sugar this campaign.



*Pan conveyor (as delivered) replacing worn-out 1960s conveyors under the lime kilns.*

On the factory side, the staff at Caro put the factory back together to be ready for the crop. Some of the major items include the replacement of two of the thick juice filter presses, a new pan conveyor under the No. 1 lime kiln and a new delivery system for milk-of-lime to the juice purification system. Additionally, new steel work was installed where the two large gear

boxes mount that drive the main tower. The beet washer shaft has been modified to make it more reliable. Pressure relief valves and new control valves have been added to the evaporator system for efficiency and safety. The discharge valve on the low raw pan has been replaced and we upgraded a vacuum pump that helps pan boiling efficiency for good sugar crystal formation.

The electrician instrument technicians were busy with more than the usual repairs. Two new main electrical control centers have been added, one for the beet pump area equipment and one for the pulp press area equipment. These will house some new variable frequency drives (VFDs) and many of the existing VFDs have been moved into these "controlled environment" rooms for their protection, allowing them to operate more efficiently and keep workers safely away from the electrical contacts.

Caro did not have any major large capital projects, but the many small and medium-sized projects mentioned above, along with some major repair items and the usual inter-campaign maintenance kept everyone busy until the start of campaign. Caro is looking forward to having the factory up, running and producing sugar for our customers.

**RIGHT** Diffuser steelwork — first half of the mounting steel work for the dual diffusion tower gearbox drives. Also in picture is the new stainless steel ceiling of the tower under the beams.



**BELOW LEFT** New piping, automatic switching valves and flow meters of the new milk-of-lime feeding system for juice purification.



**BELOW RIGHT** One of the larger VFDs and some of the disconnects housed in the pulp press area MCC.



# CROSWELL

This past summer saw more capital improvement projects installed in Croswell as a continuation of our multi-year upgrade plan.

- The existing slicer station was demolished; the old slicer station consisted of three 1960s vintage Ogden Style-10 box rotary slicing machines.
- A third rapid settling clarifier for carbonated juice has been installed.
- A new slicer building was constructed on the end of the beet washing house.
- Two new Putsch drum beet slicers (Model TSM 2200) along with a complete knife sharpening station were added. These consist of automatic knife cleaning; sorting machine, grinding and straightening machine, along with an automatic knife block washer and knife block assembler.



This will allow a big step up in cossette quality and we will be able to run the BMA extraction tower much more efficiently. These new slicing machines will be capable of 7,500 tons of beets sliced per day, per machine. The drum beet slicer is equipped with RFID chips in the knife blocks and an associated reading unit on the drum slicer. Advantages of selective knife block changes are accurate monitoring and evaluation of our production data when connected to the plant's control system.

The next big project was removing the standard liquor pressure leaf filters and repurposing two of the four removed filters for the second carbonation filtering station to increase capacity in that area.

Putsch Sibomat pressure screen filters were installed along with a bank of protective safety filters. These ensure sufficient filtering of all standard liquor before going to the pan boiling station. The Sibomat screen filters have a much smaller footprint and are capable of filtering a much higher RDS thick juice. This changes out the juice flow scheme and will take the fifth body evaporator juice directly to the melter station that collects all the sugars off of the raw centrifugal machines and runs directly to filtration.

Croswell is in the process of adding a thick juice storage system complete with a large 3.1-million gallon storage tank, juice chilling and heating and pump house to pump stored thick juice back to the factory during juice runs or factory slowdowns. With the changes in factory juice flow, we will be able to direct a portion of the thick juice to the thick juice storage tank before it goes to the melter. This will allow a lower RDS thick juice to be stored with less crystallization occurring in the storage tank.

A fourth white centrifuge was added to the centrifugal station, a Western States Titan-1700, that matches the three existing Titan-1700s.

With all of these upgrades in the last several years, Croswell is expecting a major improvement in slice rates and extraction this coming campaign.

## ABOVE TOP TO BOTTOM

*Piping under 3rd rapid settling clarifier; New Putsch beet slicers.*

## RIGHT

*Putsch Sibomat screen filters.*



# SEBEWAING

Sebewaing finished slicing beets on Feb. 27 and went directly into the syrup campaign. The season wrapped up on March 11. The shorter campaign as compared to recent years still resulted in a reasonable amount of sugar with the higher sugar content of the beets. Some of the things that caught our attention were the knife usage for the slicers and the performance of the new carbonation system.

Last summer, significant modifications were made to the flume system and a rock pocket was installed the beet washer to try to eliminate foreign material from getting to the slicers and causing damage to the knives. The results of these efforts was a reduction of knife replacement by 43 percent. Each knife costs \$11, so the savings was significant.

A new first carb tank was installed and modifications were made to the second carb tank. Both are fitted with the Richter tube gas distribution system. The goal was to increase the carbonation efficiency and avoid the dreaded mid-campaign shutdown. This was a success. Better gas distribution definitely increased the effectiveness of the carbonation system. An unexpected added bonus was an improvement in the operation of the lime kiln. The steady pull of the gas blowers off of the kiln changed the dynamics of the kiln operation. The change in the kiln resulted in less stone-on-beet and less coal-to-stone ratio than we had seen in past campaigns. This resulted in lower operating costs.

New projects for this campaign consist of an automated soda ash system, replacement of our low raw receiver, retubing another evaporator, replacing a second pellet bin, dryer seals on No. 1 and No. 2 dryers and multiple projects repairing or replacing floors and walls in the factory. A couple of these projects are being done to help in the process or help with efficiency, and the rest are necessary due to the age of the factory.

The automated soda ash system is intended to help the process by providing a solution of water and soda ash that will be added to the juice stream before, during or after the carbonation system. This will aid in the buffering of the juice before it gets to the evaporator train. Buffering of the juice helps maintain the pH of the juice as it goes through the evaporation process. The heat and time that the juice is subjected to in the evaporators has a tendency to drop the pH at times low enough to begin creating inverts that equates to loss of sugar and development of color. Neither one of these situations is desirable. Loss of sugar is lost revenue while high color results in having to wash harder and rework more sugar which takes capacity and more energy to process.

Once the final evaporator is retubed, all of our evaporators will have stainless steel tubes in them. The advantage of stainless steel as opposed to mild steel is multi fold. We are able to clean stainless steel tubes quicker and more thoroughly during campaign which helps with steam efficiency, as well as

throughput. Secondly, the longevity of stainless steel tubes is at least two times that of carbon steel.



**LEFT** *New bulk soda ash tank.*



# YOUTH PROGRAMS

Michigan Sugar Company is proud to offer several scholarships to graduating seniors in our sugarbeet growing areas. Some scholarships are administered by Michigan Sugar Company while others are administered by separate businesses or colleges.



Grace Wendland



Kara Maurer



Luke Retford

# Students Awarded Annual Scholarships

## ALBERT FLEGENHEIMER MEMORIAL SCHOLARSHIP

Grace Wendland of Reese is the recipient of the Albert Flegenheimer Memorial Scholarship. She is the daughter of Mark and Amy Wendland. Grace plans to attend Delta College to pursue a degree in agriculture education.

## GUY BEALS SCHOLARSHIP

Kara Maurer of Bad Axe is the recipient of the Guy Beals Scholarship. Kara is a 2018 graduate of Harbor Beach Community High School and plans to attend Central Michigan University in the fall to pursue a degree in physical therapy. She is the daughter of Duane and Diane Maurer.

## NEXT GENERATION SCHOLARSHIP

Luke Retford of Owendale is the recipient of the Next Generation Scholarship. Luke is a 2018 graduate of Owendale-Gagetown Senior High School and plans to attend Michigan State University in the fall to pursue a degree in crop and soil sciences. He is the son of John and Gina Retford.

## MICHIGAN SUGAR EMPLOYEE SCHOLARSHIP

**CORPORATE:** Kelsie Moeggenberg of Elwell – Kelsie is the daughter of Tony and Holly Moeggenberg. She graduated from Shepherd High School in 2015 and is a senior at Central Michigan University pursuing a degree in communication disorders with a minor in American Sign Language. She hopes to become a speech pathologist for an elementary school and work with children.

**BAY CITY:** Morgan Eremia of Caro – Morgan is the daughter of Roger and Jill Eremia and Heather Davis. She graduated from Caro High School in 2018 and plans to attend Saginaw Valley State University this fall to pursue a degree in biology as her first step to becoming an orthodontist.

**BAY CITY:** Rachel Diehl of Auburn – Rachel is the daughter of Laura and Andy Diehl. She graduated from Valley Lutheran High School in 2018 and

plans to attend Delta College in the fall. She hopes to one day work as a music therapist.

**CARO:** Kyle Graf of Caro – Kyle is the son of Kent and Lisa Graf. He graduated from the Saginaw Arts and Sciences Academy in 2018 and plans to attend Michigan State University in the fall to study pre-med.

**SEBEWAING:** Courtney Stewart of Port Austin – Courtney is the daughter of Eugene Jr. and Michele Stewart. She graduated from North Huron High School in 2018 and plans to attend Michigan State University in the fall to pursue a degree in veterinary medicine. She hopes to one day work as a veterinarian.

## CENTRAL DISTRICT SCHOLARSHIP

Kirsten Shupe of Bad Axe and Luke Retford of Owendale are the recipients of the Central District Scholarship. Retford also received the Next Generation Scholarship. Shupe is a 2018 graduate of Laker High School in Pigeon and plans to attend Delta College in the fall to pursue a degree in physical therapy. She is the daughter of Peter and Missy Shupe.

## BRIAN FOX MEMORIAL AGRICULTURE SCHOLARSHIP

Sarah Furlan and Dana Beecroft are the recipients of the 2018 Brian Fox Memorial Agriculture Scholarship, which is administered by the Ontario Sugarbeet Growers' Association and awarded to qualifying students from Lambton or Kent County, Ontario, who are entering an agricultural post-secondary field of study.

## LOREN HUMM MEMORIAL SUGARBEET GROWER'S SCHOLARSHIP

Amber Brown of St. Louis is the recipient of the Loren Humm Memorial Sugar Beet Growers' Scholarship. Amber is a 2014 graduate of Breckenridge High School and is attending Saginaw Valley State University, where she is pursuing a degree in occupational therapy. She is the daughter of Matthew and Nanette Brown. ■



*Kelsie Moeggenberg*



*Morgan Eremia*



*Rachel Diehl*



*Kyle Graf*



*Courtney Stewart*



*Kirsten Shupe*



*Sarah Furlan*

*Dana Beecroft*



*Amber Brown*



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# Paige Lupcke Crowned 2018 Michigan Sugar Queen

by Rob Clark, Director of Communications and Community Relations

**SEBEWAING** – The 54th annual Michigan Sugar Festival in Sebewaing was especially sweet this year for Paige Lupcke, who was crowned the 2018 Michigan Sugar Queen.

Lupcke, 21, of Saginaw, is a graduate of Bay City Central High School and attends Delta College, where she is part of the Michigan State University Institute of Agricultural Technology program. She hopes to complete her degree at Michigan State University. She is the daughter of Rick and Christie Lupcke.

"Being Michigan Sugar Queen is such an honor. It's not only allowing me to further my education but it's allowing me to network and create connections within the industry," said Lupcke. "Agriculture is my passion and being able to help represent the sugar industry is such an amazing opportunity."

Also crowned during the June 15 ceremony were 1st Attendant Rachel Phillips, of Almont, and 2nd Attendant Ashley Gibbs, of Almont. They, too, are serving as ambassadors for Michigan Sugar Company for the next year.

Phillips, 18, is a graduate of Almont High School and will be attending Oakland University where she plans to study veterinary medicine. She is the daughter of Robert and Ann Phillips.

Gibbs, 18, is a graduate of Almont High School and plans to study agricultural education at Michigan State University. She is the daughter of Kevin and Brenda Gibbs.

After the crowning, it was discovered by Michigan Sugar Queen Scholarship Program officials that Phillips and Gibbs are cousins.

The new Queen and Court Attendants jumped right into their year of service, appearing Saturday, June 16, in the annual Michigan Sugar Festival Parade, throwing out the first pitch at the Michigan Sugarbeets baseball game and helping hand out free bags of Pioneer Sugar and cotton candy at the festival grounds in Sebewaing.

This year, Michigan Sugar Company received 21 applications through its Michigan Sugar Queen Scholarship Program with 13 selected as finalists: Heidi Bierlein, Bailie Gagne, Ashley Gibbs, Grace Kern, Jannah LaBean, Paige Lupcke, Montana Maher, Anastasia Melnik, Morganne Narrin, Amanda Neumann, Rachel Phillips, Reagan Scott and Ashleigh Sherd.

Through the Michigan Sugar Queen Scholarship Program, a Queen and two Attendants are chosen to serve for one year as ambassadors for Michigan Sugar Company. Their duties include public appearances, community service projects, interaction with lawmakers and agriculture leaders and helping to represent Michigan Sugar Company throughout the state.

After completing the requirements of the program, the Queen receives a \$2,000 scholarship and each attendant a \$1,000 scholarship to be used to help pay for college.

"Once again, Michigan Sugar Company is fortunate to have found three young woman who we know will be excellent representatives and ambassadors for our company," said Rob Clark, Director of Communications and Community Relations for Michigan Sugar. "Their knowledge of our company and agriculture in general, along with the quality of their character, shined through during the selection process. We are looking forward to a great year with Paige, Rachel and Ashley on the Michigan Sugar Queen Court." ■

**RIGHT, TOP AND MIDDLE** Paige Lupcke, 21, of Saginaw, was crowned the 2018 Michigan Sugar Queen on Friday, June 15, during a ceremony at the 54th annual Michigan Sugar Festival in Sebewaing. Paige is a member of a local farming family and a wonderful representative for the grower-owners of Michigan Sugar Company.



**RIGHT, BOTTOM LEFT TO RIGHT** The 2018 Michigan Sugar Queen and Court: 2nd Attendant Ashley Gibbs of Almont, Michigan Sugar Queen Paige Lupcke of Saginaw, and 1st Attendant Rachel Phillips of Almont.

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## Great Lakes Loons' Long Balls Just Got a Bit Sweeter

by Rob Clark, Director of Communications and Community Relations

### Michigan Sugar Home Runs providing donations to Hidden Harvest

MIDLAND – It's always exciting when the Great Lakes Loons hit a home run.

But this season, Loons' long balls were a bit sweeter thanks to a partnership between the minor league baseball team, Michigan Sugar Company and Hidden Harvest, a food rescue agency based in Saginaw.

Here's how it works:

Every time the Loons hit a home run, either at Dow Diamond in Midland or on the road, Michigan Sugar donated 10 pounds of white granulated Pioneer Sugar to Hidden Harvest to help the nonprofit fulfill its mission of curbing hunger in the Great Lakes Bay Region.

Since the Class A affiliate of the Los Angeles Dodgers began play in Midland in 2007, the team has averaged 91 home runs per season, but has often gone above the 100-home-run mark. This year saw 84 dingers during the regular season. On Aug. 23, during an on-field presentation to Hidden Harvest before the Loons game, Michigan Sugar rounded its donation to 1,000 pounds of sugar.

"Local ingredients being used to make a birthday cake for a kid staying in one of our local homeless shelters, warm cookies made

from scratch for the meal served at a local soup kitchen, or even having a bag of Michigan Sugar included as part of a food distribution to a local family in need from one of our many food pantry partners, this is what the partnership between the Great Lakes Loons, Michigan Sugar Company and Hidden Harvest is accomplishing," said Samantha McKenzie, President and CEO of Hidden Harvest.

"As a food rescue and hunger relief agency in the Great Lakes Bay Region, Hidden Harvest works with more than 175 community feeding programs that in turn will benefit from Michigan Sugar Home Runs."

In addition to creating a moment of exclusivity for Michigan Sugar Company each time the Loons hit a home run, the program also generated a bit of added excitement for fans. When the Loons went deep at home, Dow Diamond's stadium scoreboards lit up with specially created "Michigan Sugar Home Run" graphics.

Mention of the sugar donation was made in the stadium and as part of the game broadcast on ESPN 100.9 FM, a radio station owned and operated by the Loons.

Having donated 60,825 pounds of sugar to Hidden Harvest since 1998, Michigan Sugar Company also donates approximately 65,000 pounds of sugar each year to charitable organizations and for events throughout Michigan.

"There is nothing sweeter than a meaningful partnership between a Bay City-based company, a Midland-based baseball team and a Saginaw-based nonprofit organization," said Rob Clark, Director of Communications and Community Relations for Michigan Sugar Company. "This is just one way we continue to tell our story while giving back in a meaningful way to the community." ■



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